



Publication number : **0 617 531 A1**

EUROPEAN PATENT APPLICATION

Application number : **94302149.3**

Date of filing : **24.03.94**

Int. Cl.⁵ : **H04L 27/02, H04L 27/34,
H04L 5/06, H04L 27/18,
H04N 7/13**

Priority : **25.03.93 JP 66461/93
10.05.93 JP 132984/93
24.09.93 JP 261612/93**

Date of publication of application :
28.09.94 Bulletin 94/39

Designated Contracting States :
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE**

Applicant : **MATSUSHITA ELECTRIC
INDUSTRIAL CO., LTD
1006, Oaza Kadoma,
Kadoma-shi
Osaka 571 (JP)**

Inventor : **Oshima, Mitsuaki
115-3 Katsura Minami Tatsumi-cho
Nishikyo-ku, Kyoto (JP)**

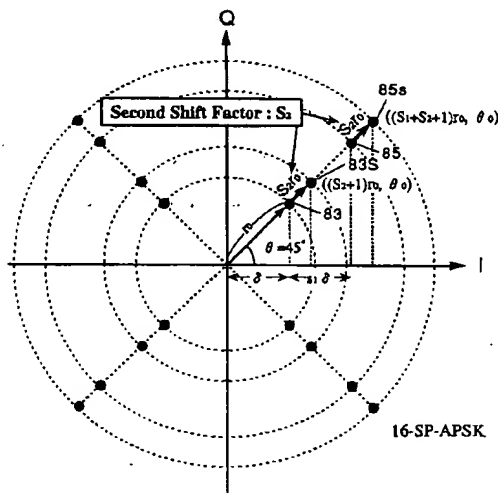
Representative : **Senior, Alan Murray
J.A. KEMP & CO.,
14 South Square,
Gray's Inn
London WC1R 5LX (GB)**

54 Multiresolution transmission system.

57 In the transmitter side, data are divided into two or more groups, according to importance. In a three groups system, for example, the data streams are then mapped onto a multiresolution constellation (QAM or modified PSK) in the following way. The most important data determine the quadrant, the next most important determine which of four subsets is used in the quadrant, and the least important determine which point is used within that subset. This mapping system allows receivers of differing capabilities to detect as much data as they are able, or a single receiver to detect as much data as the channel quality allows. For example, a QPSK receiver could detect the most important data, a modified 16QAM receiver could detect the most important and second most important data, while a modified 64QAM receiver could receive all the data.

Furthermore, in an OFDM system, multiresolution transmission is provided by using long guard times and/or wider channel spacing (equivalently, longer symbols) for the more important data. A system using n-level VSB is also described.

FIG. 140



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